

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
COLORADO RIVER BASIN REGION**

**RESOLUTION NO. 01-197**

A Resolution Amending the Water Quality Control Plan  
for the Colorado River Basin  
to Establish a Total Maximum Daily Load for Pathogens  
for the New River

WHEREAS, the California Regional Water Quality Control Board, Colorado River Basin Region (hereinafter Regional Board), finds that:

1. An updated Water Quality Control Plan for the Colorado River Basin (Basin Plan) was adopted by the Regional Board on November 17, 1993, approved by the State Water Resources Control Board (SWRCB) on February 17, 1994, and approved by the Office of Administrative Law on August 3, 1994.
2. Warm freshwater habitat (WARM), wildlife habitat (WILD), preservation of rare, threatened, and endangered species (RARE), water contact recreation (REC I), non-contact recreation (REC II), and freshwater replenishment (FRSH) are among the beneficial use designations specified in the Basin Plan for the New River.
3. The Basin Plan includes narrative water quality objectives for fecal coliform, E. coli, and enterococci bacteria for the New River to protect the beneficial uses listed in Finding No. 2, above.
4. Water quality objectives are not being met in the New River primarily because of direct and indirect discharges of untreated, partially treated, and undisinfected wastes from Mexico; and because of direct and indirect discharges of undisinfected wastewater from some domestic wastewater treatment plants in Imperial County.
5. Pursuant to Section 303(d) of the Clean Water Act, the Regional Board, with the concurrence of the State Board, listed the New River as water quality limited because of the pathogenic impairments as indicated by concentrations of fecal and E. coli bacteria. Section 303(d) of the Clean Water Act requires the establishment of the Total Maximum Daily Load (TMDL) of pathogens that can be discharged while still ensuring compliance with water quality standards. Section 303(d) also requires the allocation of this TMDL among sources of pathogens, together with an implementation plan and schedule that will ensure that the TMDL is met and that compliance with water quality standards is achieved.
6. The New River Pathogen TMDL Report (hereafter "TMDL Report") and the proposed Basin Plan amendment (hereafter "Attachment 2") to establish the TMDL are hereto made part of this Resolution by reference.
7. The TMDL Report and related Basin Plan amendment attached to this resolution meet the requirements of Section 303(d) of the Clean Water Act. The amendment requires, in part, that wastewater plants in Imperial County provide effluent disinfection to control their pathogenic contribution and asks that the U.S. Government submit a plan with proposed

measures to address pollution from Mexico so that water quality standards will be met by 2004.

8. The Regional Board prepared and distributed written reports regarding adoption of the Basin Plan amendment in compliance with applicable state and federal environmental regulations (Title 23, California Code of Regulations, Section 3775 et seq.; and Title 40, Code of Federal Regulations, Parts 25 and 131).
9. The process of basin planning has been certified by the Secretary for Resources as exempt from the requirements of the California Environmental Quality Act (Pub. Resources Code, § 21000 et seq.) to prepare an Environmental Impact Report or Negative Declaration. (Pub. Resources Code, 21080.5; Cal. Code Regs., tit. 14, 15251, subd. (g).) The TMDL Report-Basin Plan amendment package includes an Environmental Checklist, an assessment of the environmental impacts of the Basin Plan amendment, and a discussion of alternatives, among other analyses. The amended Basin Plan, Environmental Checklist, TMDL Report, and supporting documentation are functionally equivalent to an Environmental Impact Report or Negative Declaration.
10. The proposed adoption of the Basin Plan amendment based on the TMDL Report is a regulatory action subject to the requirements of Public Resources Code section 21159. Consistent with the requirements of that section, the CEQA Checklist and the CEQA Checklist Discussion include, among other things, an analysis of reasonably foreseeable environmental impacts associated with proposed methods of compliance set forth in the Basin Plan amendment, an analysis of reasonably foreseeable feasible mitigation measures to reduce or avoid those impacts, and an analysis of reasonably foreseeable alternative means of compliance with the requirements embodied by the Basin Plan amendment that would avoid or eliminate the related environmental impacts. (Pub. Resources Code, 21159, subd. (a)(1)-(3); Cal. Code Regs., tit. 14, 15187, subds. (b), (c)(1)-(3).) In so doing, the analysis in the CEQA Checklist and CEQA Checklist Discussion takes into account a reasonable range of environmental, economic, and technical factors. CEQA analysis determined that the proposed Basin Plan Amendment would have no significant adverse effect on the environment.
11. The Regional Board has considered federal and state antidegradation policies and other relevant water quality control policies and finds the Basin Plan amendment consistent with those policies.
12. Since January 1998, Regional Board staff has engaged interested parties in stakeholder involvement through regular meetings with the New River/Mexicali Sanitation Project Binational Technical Advisory Committee, special discussions with the International Boundary and Water Commission, discussions with City of Calexico personnel, and other outreach efforts throughout the Region.
13. Consistent with Title 23, California Code of Regulations, Sections 3778 through 3780, the Regional Board consulted about the proposed action with stakeholders in the Region and with other potentially affected parties, considered and addressed comments on the matter, and considered and incorporated feasible mitigation measures to avoid significant impacts on the environment.

14. On October 10, 2001, the Regional Board held a Public Hearing to consider the TMDL Report and the Basin Plan amendment. Notice of the Public Hearing was given to all interested persons and published in accordance with Water Code Section 13244 and Title 40, Code of Federal Regulations, Part 25.
15. The Basin Plan amendment must be submitted for review and approval by the SWRCB, the Office of Administrative Law (OAL), and the U.S. Environmental Protection Agency. Once approved by the SWRCB, the amendment is submitted to OAL. A Notice of Decision will be filed after the SWRCB and OAL have acted on this matter. The SWRCB will forward the approved amendment to the U.S. Environmental Protection Agency for review and approval.

NOW, THEREFORE, BE IT RESOLVED THAT:

1. The Regional Board rescind Resolution No. 01-101 because stakeholders potentially affected by the amendment were reportedly not given sufficient notification prior to the 28 June 2001 Regional Board Hearing.
2. The Regional Board adopts the amendment to the Water Quality Control Plan for the Colorado River Basin as set forth in Attachment 2.
3. The Executive Officer is directed to forward copies of the Basin Plan amendment to the SWRCB in accordance with the requirement of Section 13245 of the California Water Code.
4. The Regional Board requests that the State Water Resources Control Board approve the Basin Plan amendments in accordance with Sections 13245 and 13246 of the California Water Code and forward it to the Office of Administrative Law and United States Environmental Protection Agency for approval.
5. The Executive Officer is directed to file a Notice of Decision with the California Secretary for Resources after final approval of the Basin Plan amendment, in accordance with Section 21080.5(d) (2)(E) of the Public Resources Code and Title 23, California Code of Regulations, Section 3781.
6. Resolved that, if during its approval process the SWRCB or OAL determines that minor, non-substantive corrections to the language of the amendment are needed for clarity or consistency, the Executive Officer may make such changes, and shall inform the Board of any such changes.

I, Phil Gruenberg, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of a resolution adopted by the California Regional Water Quality Control Board, Colorado River Basin Region, on October 10, 2001.

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Phil Gruenberg  
Executive Officer

**ATTACHMENT 2**

**An Amendment to the Water Quality Control Plan for the Colorado River Basin Region  
to Establish the  
New River Pathogen Total Maximum Daily Load**

**AMENDMENT:**

(Proposed additions are denoted by underlined text, proposed deletions are denoted by ~~striketrough text~~)

Page 3-3, edit the first paragraph under "I. BACTERIA" as follows:

In waters designated for water contact recreation (REC I) or noncontact water recreation (REC II), the following bacterial objectives apply: Although the objectives are expressed as fecal coliforms, E. coli, and enterococci bacteria, they address pathogenic microorganisms in general<sup>1</sup> (e.g., bacteria, viruses, and fungi).

Page 3-3, delete the following paragraphs under "I. BACTERIA":

~~For drainageways in Imperial Valley receiving little or no public use, the Regional Board may waive the application of these objectives toward nonpoint source discharges and existing point source discharges of at least secondary treated sewage effluent. Waivers may only be issued for a maximum of three years and may be renewed for subsequent three year periods. Consideration will be given to the following prior to issuance or reissuance of waivers:~~

~~———What is the threat to in stream aquatic life from the discharge of effluents that are chlorinated and dechlorinated;~~

~~———How much would public health protection be enhanced by chlorination and dechlorination of effluents; and~~

~~———What are the economic hardships that result from chlorination and dechlorination of effluents.~~

~~The Regional Board will consult with the California Department of Health Services in assessing public health risks. Waivers will be sent to the State Water Resources Control Board and the U.S. Environmental Protection Agency for review.~~

Page 3-5, edit the first and second paragraphs in Section III.B of Chapter 3 so it reads as follows:

Minute No. 264 of the Mexican-American Water Treaty titled "Recommendations for Solution of the New River Border Sanitation Problem at Calexico, California - Mexicali, Baja California Norte" was approved by the Governments of the United States and Mexico effective on December 4, 1980. Minute No. 264 specifies qualitative and quantitative standards for the New River at the International Boundary and upstream of the International Boundary in Mexico.

The quantitative standards of Minute No. 264 are contained in Table 3-1. Following are the qualitative standards of Minute No. 264 for the New River at the ~~International Boundary locations specified below~~ (interim solution).

Page 3-7, following the footnotes for Table 3-1, add the following paragraphs:

Monitoring data collected by the Regional Board and the United States section of the International Boundary and Water Commission indicate that with the exception of pH, all quantitative and qualitative standards of Minute No. 264 have been violated since they were established. Moreover, with the exception of pH and DO, the standards do not protect or achieve the New River water quality given that: (1) they are inconsistent with the General Surface Water Objectives of this Basin Plan (p. 3-1), and (2)

<sup>1</sup> Fecal coliforms and E. coli bacteria are being used as the indicator microorganisms in the Region until better and similarly practical tests become readily available in the Region to more specifically target pathogens.

they are actually applicable to the New River in Mexico, not at the International Boundary. It is therefore appropriate for the Regional Board, as the agency responsible for protecting the quality of the waters in this region of the United States, to develop and enforce water quality objectives for the New River that are consistent with State and USEPA criteria for surface waters and that protect the waters of the region as follows:

#### 1. Bacteria Water Quality Objectives

The bacterial standards identified in the General Surface Water Objectives section of this Basin Plan (p. 3-3) are applicable to the entire stretch of the New River in the United States.

The Pathogen Total Maximum Daily Load (TMDL) and associated implementation actions are described in Chapter 4, Section V(A). Compliance Monitoring activities for the TMDL are described in Chapter 6, Section II(B).

Page 4-8, edit Section IV.A as follows:

### **A. NEW RIVER POLLUTION BY MEXICO**

The New River rises in Mexico, flows northward across the International Boundary and through California's Imperial Valley before ultimately discharging into the Salton Sea. The River conveys agricultural drainage from the Imperial and Mexicali Valleys to the Salton Sea. The River also conveys community and industrial wastewaters. In Imperial Valley, waste discharge requirements are prescribed and enforced by this Regional Board for discharges of treated community and industrial wastewater. However, Mexico discharges raw and inadequately treated sewage, toxic industrial wastes, garbage and other solid wastes, animal wastes, and occasionally geothermal wastewaters from the Mexicali area into the United States via the New River. These discharges of raw and inadequately treated sewage and industrial wastes have continued for over 40 years. The resulting pollution of the New River at the International Boundary is such that sewage solids continue to be plainly visible in the River at the International Boundary. Also, toxic chemicals have been detected in the River water. ~~Although Mexico has made some efforts to upgrade Mexicali's wastewater collection and treatment system, these efforts have not been sufficient to correct all pollution in the River. Additionally, poor maintenance of the collection system has resulted in frequent breakdowns with the resultant discharge of raw sewage to the River. As Mexicali's industry and its population continue to grow, these problems are expected to worsen unless corrective measures are undertaken.~~ Responsibility within the United States for dealing with Mexico on the New River pollution problem is with the USEPA and with the United States Section of the International Boundary and Water Commission (IBWC) and the USEPA, a joint United States/Mexico federal agency with responsibility for dealing with border water and sanitation problems between the two nations.

The IBWC is a US-Mexican federal agency with roots in the "Treaty of Guadalupe Hidalgo of Peace, Limits and Settlement," which was signed by both Countries in February 1848. IBWC was established as the "International Boundary Commission" (IBC) in 1889 to deal with boundary issues. In 1944, the US and Mexico signed the Treaty entitled "Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande" (a.k.a. the "Mexican-American Water Treaty"), which was ratified by the US Congress in 1945. The Mexican-American Water Treaty changed the name of IBC to IBWC, and expanded their jurisdiction and responsibilities. The IBWC's jurisdiction extends along the boundary and into both countries where international projects have been constructed. The agencies responsibilities include the implementation of boundary and water treaties and mediating disputes that arise in their application. The treaty specifically charged the IBWC with solving border sanitation and water quality problems.

In August 1983, the Presidents of Mexico and the United States signed the La Paz Agreement to protect and improve the environment in the border area. The La Paz Agreement designates the USEPA as the US coordinator for pursuing practical, legal, institutional and technical measures necessary to protect the environment. The agreement originally named Mexican Secretaría de Desarrollo Urbano y Ecología (SEDUE) as the coordinator for Mexico. In 1992, Mexico transferred responsibility for border problems to

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the Secretaría de Desarrollo Social (SEDESOL). Currently, the Comision Nacional del Agua (CNA) has primary responsibility for water quality problems along the border for Mexico.

For over 30 years, this Regional Board has been encouraging the United States Commissioner on the IBWC to obtain corrections of this gross problem. Since 1975, the Regional Board has monitored water pollution in the New River in an effort to identify the pollutants coming from Mexico. This information has been forwarded to the United States Commissioner and to others to aid and encourage Mexico in implementing corrective actions.

For sewage service purposes, the Mexicali metropolitan area is divided into the Mexicali I and Mexicali II areas. Mexicali I includes most of the old, well established neighborhoods to the west, the existing municipal sewage collection and treatment system,(excluding the Gonzalez-Ortega lagoon system) and the Zaragoza lagoons. The Mexicali II service area includes the new residential and industrial development to the east of the Gonzalez-Ortega lagoons, and the proposed new 20-mgd WWTF. The City of Mexicali is undergoing unprecedented growth. In the year 2000, the "Instituto Nacional de Estadisticas Geografia e Informatica" (INEGI) estimated the population within the Municipality of Mexicali to be 765,000 people, and projected a 2.6% annual growth rate. Based on this, the production of domestic and industrial wastewater is projected to increase to 58-67 mgd over the next 20 years. However, Mexicali lacks an adequate sewage collection, conveyance, and treatment system for current and projected flows. It is currently served by two stabilization lagoon systems, which lack disinfection facilities. The systems have a combined design capacity of about 20-25 mgd, however sewage flows calculated by CH2M Hill in 1997 ranged from 35 to 40 mgd.

The Regional Board staff has conducted investigations of the New River watershed in Mexico to determine the type(s) and extent of waste discharges into the New River and its tributaries so that possible corrective measures could be considered. The investigations have been successful in identifying the problems that must be addressed to obtain adequate corrections. These problems include the following:

- Breakdowns in Mexicali's sewer system from either occasional pump failure or line incapacity/collapse resulting in the discharge of raw sewage to the River;
- Discharge of untreated industrial wastes to the River including highly toxic chemical wastes, many of which are on USEPA's list of 129 priority pollutants and some of which are carcinogens;
- Inadequate treatment of sewage and industrial wastes by the Mexicali lagoon systems, whose sewage treatment plant consists of nothing more than raw sewage lagoons;
- Discharge of solid waste in or near the River and its tributaries;
- Discharge of raw sewage to the River from adjacent unsewered residences;
- Occasional ~~Discharge~~ discharges of wastes to the River by septic tank pumpers;
- Periodic direct discharges of untreated wastes from slaughterhouse, dairy, and hog farms;
- Discharges from residential hog and cattle pens located adjacent to the River and its tributaries; and
- ~~Periodic~~ Occasional discharges of geothermal wastes to the River.

Described below is a summary of actions taken by various agencies (Federal and State) to correct the international pollution problems in the New River watershed.

In August 1980, Minute No. 264 to the Mexican-American Water Treaty was signed which specified time schedules for completing works that were to result in a full cleanup of the river. In addition, minimal water quality standards were specified for New River water quality at the International Boundary. Unfortunately,

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the specified schedules and standards of Minute No. 264 were not met and the need for further improvements to Mexicali's sewage work became evident.

~~In August 1983, a United States/Mexican agreement for protection and improvement of the environment in the border area was signed by the Presidents of Mexico and the United States. Under this agreement, primary responsibility for border environmental problems, including the New River pollution problem, was transferred from IBWC to the United States Environmental Protection Agency (EPA) for the United States, and to the Mexican Secretaría de Desarrollo Urbano y Ecología (SDUE) for Mexico. In 1992, Mexico transferred responsibility for border problems to the Secretaría de Desarrollo Social (SEDESOL).~~

In 1987, Montgomery Engineers Inc., was contracted by the Regional Board to investigate pollution abatement measures within the United States for the New and Alamo Rivers. A final report entitled New River Pollution Abatement Report - Recommended Projects, December 1987, recommended that a screening device and chlorination/aeration facility be constructed near the International Boundary. A proposed appropriation of \$1,525,000 for follow-up work including actual engineering designs was rejected by the Governor of California on July 8, 1988. The Administration's position was that pollution emanating from Mexico is a complex international problem which demands an international solution and that the Federal Government must address this issue rather than the State.

On April 15, 1987, Minute No. 274 to the Mexican-American Water Treaty was approved by the governments of Mexico and the United States. The Minute provided for a \$1,200,000 United States/Mexico jointly funded project to construct certain works in Mexico to reduce pollution in the New River. The project included construction of a major new pumping plant and sewer line, placement of standby pumps and rehabilitation of existing pumps at Pumping Plants No. 1 and 2, and purchase of sewer line cleaning equipment. Although efforts were made by the Government of Mexico to rehabilitate and expand the sewage system in Mexicali, the accelerated urban growth surpassed the capacity of these works and discharges of untreated industrial and domestic wastewaters into the New River continued.

~~At present, the following actions have been initiated to work towards a long-term solution to the international pollution problems. Minute No. 288 was signed by the Commissioners in October of 1992 titled "Conceptual Plan for the Long Term Solution to the Border Sanitation Problem of the New River at Calexico, CA - Mexicali, Baja California". It was the result of a recommendation by the United States and Mexico at the IXth US/Mexico Binational Commission that priority attention should be given to the cleanup of the New River. This Minute sets out a conceptual plan for construction and rehabilitation of facilities to collect, treat and dispose of Mexicali wastewaters. Two separate sanitation systems, Mexicali I and Mexicali II, would be created along with a general program of actions to eliminate the discharges into the New River of untreated and partially treated domestic and industrial wastewaters. Within approximately 6 months of the approval of this Minute, plans are to be developed for the implementation of the conceptual plan, with subsequent adoption of a new Minute recommending the specific projects and schedules of works supporting the conceptual plan, along with financing sources. Minute No. 288 established short and long-term solutions for the sanitation of the New River at the International Boundary. These short-term measures, known as "Quick Fixes," were designed to be compatible with the long-term solution, and were funded through a cost sharing agreement between both countries. The U.S. and Mexico funded 55% and 45% respectively, of the total \$7.5 million required for the Quick Fixes. The Binational Technical Advisory Committee (BTAC) implemented the quick fix and is comprised of representatives from IBWC, Mexican Section (CILA), State Public Services Commission of Mexicali (CESPM), National Water Commission (CAN) (Secretary of Human Settlements and Public Works (SAHOPE), the Municipality of Mexicali for Mexico, the United States IBWC Section, US EPA, California State Water Resources Control Board, Regional Board, Imperial County, and the Imperial Irrigation District. The BTAC improved communication and technology transfer between the two countries. The Quick Fixes are summarized below:~~

- Improvements to the sewage collection system, either by lining or replacing existing sewer pipes and acquiring modern sewer line cleaning equipment;



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- Rehabilitation and upgrading of pumping facilities that lift and deliver wastewater to treatment facilities; and
- Improvements to the existing lagoons at the Ignacio Zaragoza (Mexicali I) and Gonzalez-Ortega wastewater treatment facilities in Mexicali to increase their reliability and capacity.

As of May 2000, nearly 100% of the Quick Fixes were completed and operating successfully

The long-term strategy consists of a series of sewage infrastructure projects for Mexicali I and Mexicali II service areas to address New River pollution. The Mexicali I projects consist of the replacement/rehabilitation of about 44,000 feet of sewage pipes, rehabilitation of sewage pump stations, and expansion of the Mexicali I wastewater treatment plant to 30 mgd. The Mexicali II projects entail the construction of a new 20-mgd wastewater treatment plant (a.k.a. Mexicali II WWTP), the sewage Pumping Plant No. 4 for the new WWTP, installation of telemetry equipment for the WWTP and pumping plants, construction of 31,170 feet of discharge forcemain<sup>2</sup> for Pumping Plant No. 4, construction/rehabilitation of about 96,000 feet of sewer lines, and rehabilitation of two sewage lift stations. The proposed projects have an estimated cost of \$50 million dollars. The USEPA will fund 55% and the Mexican government the remaining 45% of the total cost. The projects received conditional certification by the Border Environment Cooperation Commission on December 5, 1997, and final certification as of January 7, 1998. In November 1999, the NADBank developed and submitted a financing plan for the projects to USEPA and the Mexican Government for approval. The plan was approved by both entities and includes Federal, State, and local funds to pay for project costs. Construction of the projects is underway, and should improve the overall quality of the New River, when properly operated and maintained. Completion of the new WWTF is expected by mid-2002. However, the existing lagoon systems and the proposed 20-mgd facility do not include disinfection.

The Regional Board will continue to work with State and Federal authorities in an effort to bring about a solution to this longstanding problem. However, the cooperation of Mexico is crucial in solving this problem. The Regional Board presently supports correction of the problem in Mexico as the most viable solution. The successful implementation of Minutes No. 264 and 288 to the Mexican American Water Treaty would represent an important step in progressing toward this goal.

~~With the cooperation of the IBWC, the sources of pollution to the New River in Mexico have been substantially identified. This identification will facilitate determination of the specific corrective works needed in Mexicali to resolve the pollution problem. Funding of these corrective works will be the next major hurdle.~~

Water quality sampling and analyses of the New River at the International Boundary by the Regional Board will continue as funding permits. However, the conditions and characteristics of the river at the International Boundary are a federal responsibility. Since the data is forwarded to all the agencies in Mexico and the United States that share responsibility for corrective action, it serves as a constant reminder that there is concern to keep the river clean, and that pressure will continue to be administered by the Regional Board. Monitoring results will be utilized as follows:

- ~~Appraising~~ Informing the United States Environmental Protection Agency and other appropriate agencies of pollution problems in the New River at the International Boundary requiring attention;
- Gauging the effectiveness of cleanup measures in Mexico;
- Evaluating Mexico's compliance with the standards set forth in Minute No. 264;
- Formulating plans for construction and operation of facilities needed to assure permanent correction of this New River pollution problem;

<sup>2</sup> CNA is responsible for this project. As of December 1997, a CNA contractor had already installed approximately 1.5 miles of the force main, a 54-inch steel pipe. However, as of January 1998, the project has been on hold reportedly due to problems between CNA and its contractor.

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- Providing information on the appropriateness of New River water for specific beneficial uses;
- Alerting the State and local health authorities of health hazards associated with New River water;  
and
- Identifying new pollutants
- Determining compliance with the waste load and load allocation.

Page 4-13, at the top of the page, replace Roman numeral "V" with Roman numeral "VI" and add the following new Section V:

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### **V. ACTIONS FOR TOTAL MAXIMUM DAILY LOADS**

#### **A. NEW RIVER PATHOGEN TOTAL MAXIMUM DAILY LOAD**

##### **1. TMDL ELEMENTS**

**Table 4-1: New River Pathogen TMDL Elements**

<u>ELEMENT</u>	<u>DESCRIPTION</u>												
<u>Problem Statement</u>  (Impaired water quality standard)	The New River headwaters start about 12-16 miles south of Calexico in the Mexicali Valley, Mexico. Bacteria, which are pathogen-indicator organisms, impair the entire segment of the New River in the United States. Pollution is severest at the International Boundary due to discharges of wastes from Mexico. The bacterial concentrations exceed the water quality objectives established to protect mainly the water contact and non-contact water recreational beneficial uses of the New River.												
<u>Numeric Target</u>	<p>The following are the in-stream numeric water quality targets for this TMDL:</p> <table><tr><th><u>Indicator Parameters</u></th><th><u>30-day Geometric Mean<sup>a</sup></u></th><th><u>Maximum</u></th></tr><tr><td><u>Fecal Coliforms</u></td><td>200 MPN<sup>b</sup>/100 ml</td><td><u>c</u></td></tr><tr><td><u>E. Coli</u></td><td><u>126 MPN/100 ml</u></td><td><u>400 MPN/100 ml</u></td></tr><tr><td><u>Enterococci</u></td><td><u>33 MPN/100 ml</u></td><td><u>100 MPN/100 ml</u></td></tr></table> <p>_____</p> <p>a. <u>Based on a minimum of no less than 5 samples equally spaced over a 30-day period.</u></p> <p>b. <u>Most probable number.</u></p> <p>c. <u>No more than 10% of total samples during any 30-day period shall exceed 400 MPN/100 ml.</u></p>	<u>Indicator Parameters</u>	<u>30-day Geometric Mean<sup>a</sup></u>	<u>Maximum</u>	<u>Fecal Coliforms</u>	200 MPN <sup>b</sup> /100 ml	<u>c</u>	<u>E. Coli</u>	<u>126 MPN/100 ml</u>	<u>400 MPN/100 ml</u>	<u>Enterococci</u>	<u>33 MPN/100 ml</u>	<u>100 MPN/100 ml</u>
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<u>Enterococci</u>	<u>33 MPN/100 ml</u>	<u>100 MPN/100 ml</u>											
<u>Source Analysis</u>	The main sources of pathogens as indicated by fecal coliforms and E. coli bacteria in the New River are discharges of municipal wastes from the Mexicali Valley, Mexico and undisinfected but treated wastewater discharges from five domestic wastewater treatment plants in the Imperial Valley. Natural sources of pathogens appear to play a relatively insignificant role, but their actual contribution, and contributions from other nonpoint sources of pollution in general require proper characterization.												

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<u>ELEMENT</u>	<u>DESCRIPTION</u>												
<u><b>Allocations and Margin of Safety</b></u>	Discharges from point sources and nonpoint sources of pollution shall not exceed the following waste load allocations (WLAs) and load allocations (LAs), respectively:												
	<u><b>WLAs and LAs</b></u>												
	<table><tr><td><u><b>Indicator Parameters</b></u></td><td><u><b>30-Day Geometric Mean<sup>a</sup></b></u></td><td><u><b>Maximum</b></u></td></tr><tr><td><u>Fecal Coliforms</u></td><td><u>200 MPN<sup>b</sup>/100ml</u></td><td><u>c</u></td></tr><tr><td><u>E. coli</u></td><td><u>126 MPN/100 ml</u></td><td><u>400 MPN/100 ml</u></td></tr><tr><td><u>Enterococci</u></td><td><u>33 MPN/100 ml</u></td><td><u>100 MPN/100 ml</u></td></tr></table>	<u><b>Indicator Parameters</b></u>	<u><b>30-Day Geometric Mean<sup>a</sup></b></u>	<u><b>Maximum</b></u>	<u>Fecal Coliforms</u>	<u>200 MPN<sup>b</sup>/100ml</u>	<u>c</u>	<u>E. coli</u>	<u>126 MPN/100 ml</u>	<u>400 MPN/100 ml</u>	<u>Enterococci</u>	<u>33 MPN/100 ml</u>	<u>100 MPN/100 ml</u>
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	<hr/>												
	a. <u>Based on a minimum of no less than 5 samples equally spaced over a 30-day period.</u>												
	b. <u>Most probable number.</u>												
c. <u>No more than 10% of total samples during any 30-day period shall exceed 400 MPN/100 ml.</u>													
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<p>The allocations are applicable throughout the entire stretch of the New River in the U.S. The numeric target concentrations are based on extensive epidemiological studies conducted by the USEPA and others. <del>The studies are based on risk analyses, which implicitly contain a margin of safety. An additional implicit margin of safety is included in this TMDL, given that dilution from agricultural return flows and industrial discharges were not factored into the selection of the target. Therefore, the concentrations are considered to contain an adequate margin of safety.</del> By setting the TMDL and each of the load and waste load allocations equal to the standards, the proposed TMDL approach results in very limited uncertainty about whether attainment of the TMDL and the individual allocations will result in attainment of the applicable numeric standards. Moreover, the TMDL analysis takes a conservative approach of providing load and wasteload allocations even for relatively minor loading sources, which helps to ensure that the selected source control approach will result in attainment of the numeric objectives. Finally, to help address uncertainty concerning the bacterial die-off and regrowth dynamics in the River, the TMDL provides implicit margin of safety by including a relatively aggressive monitoring and review plan which will help ensure that needed data are collected and that, if necessary, the TMDL will be revised in the relatively near future.</p>													
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## **2. Implementation Actions for Attainment of TMDL**

The pathogen load allocations, waste load allocations, and water quality objectives shall be applicable to the New River for the protection of the REC-I and REC-II beneficial uses and shall be achieved within three years of USEPA approval of the TMDL. To this end, the following actions shall be implemented.

### **2.1 Wastewater Treatment Plants**

All point source dischargers discharging, potentially discharging, or proposing to discharge waste with bacteria into the New River and/or surface waters tributary to the New River, at concentrations that violate or threaten to violate waste load allocations (WLAs), shall provide adequate disinfection to meet the WLAs specified in Table 4-1, above.

Currently, there are five (5) NPDES permitted facilities discharging undisinfected municipal wastewater into the New River: the City of Brawley WWTP, Seeley County Water District (SCWD) WWTP; Date

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Gardens Mobile Home Park (DGMHP) WWTP; City of Westmorland WWTP, and McCabe Union School District (MCUSD) WWTP. Both the City of Westmorland and City of Brawley have been issued Time Schedule Orders (TSOs) requiring them to upgrade their WWTPs by January 2002 and March 2002, respectively. The City of Westmorland is already upgrading its WWTP and expects to complete the upgrade by 2002. The City of Brawley is securing financing from the North America Development Bank to upgrade its WWTP. The NPDES permit for the City of Brawley already prescribes effluent disinfection limits consistent with this TMDL. However, neither the TSO nor the NPDES permits for the City of Westmorland contains requirements for disinfection.

It is essential that the referenced facilities that are not disinfecting provide adequate effluent disinfection at the earliest possible date. Towards this end, the Executive Officer shall direct staff to draft revised NPDES permits for these facilities incorporating the WLAs prescribed in Table 4-1 and monitoring requirements for the WLAs. Draft revised permits shall be ready for Regional Board consideration in accordance with the following schedule or sooner as resources allow:

<u>Facility Name</u>	<u>NPDES Permit No.</u>	<u>Expiration Date</u>	<u>Revision Date*</u>
<u>City of Westmorland WWTP</u>	<u>CA0105007</u>	<u>1/28/03</u>	<u>{Year 1}*</u>
<u>Seeley County Water District WWTP</u>	<u>CA0105023</u>	<u>6/25/02</u>	<u>{Year 1}*</u>
<u>Date Gardens Mobile Home Park WWTP</u>	<u>CA0104841</u>	<u>9/24/02</u>	<u>{Year 1}*</u>
<u>McCabe Union High School District WWTP</u>	<u>CA0104281</u>	<u>11/29/00</u>	<u>{Year 1}*</u>

\* Year 1 refers to the effective date to revise the permits for these plants, which shall be 30 days after USEPA approval of the TMDL.

Additionally, SCWD, DGMHP, and MCUSD shall each:

- a. **By (3 months following USEPA approval of this TMDL)\* and pursuant to Section 13267 of the California Water Code, submit a technical report in the form of plans, specifications, and proposed measures to be taken to secure funds to comply with their WLAs by no later than (32 months following USEPA approval of this TMDL)\*.**
- b. Submit quarterly reports to the Executive Officer describing their progress towards meeting their WLAs. Quarterly reports shall be due on the 15<sup>th</sup> day of the month following the reporting calendar quarter, and begin the first calendar quarter immediately following USEPA approval.

## 2.2 United States Government

Neither the existing lagoon systems nor the proposed wastewater treatment facilities for the Mexicali metropolitan area include disinfection. Also, there are a significant number of unregulated point and nonpoint sources of bacteria which discharge directly into the New River watershed in Mexicali, and an unknown number of raw sewage bypasses, which are not addressed by the certified projects. Therefore, the projects by themselves will not result in attainment of the bacterial load allocations downstream of the International Boundary. Consequently, it is necessary for the U.S. Government to pursue additional steps to ensure this TMDL complies with the requirements of Section 303(d) of the Clean Water Act and ensure discharges of wastes from Mexico will not cause or contribute to a violation of this TMDL. Therefore, pursuant to Section 13225 of the California Water Code, the U.S. Section of the International Boundary and Water Commission and USEPA shall:

\* Note: Upon USEPA TMDL approval, this parenthetical "formula" will be replaced by the date certain, based on the date of approval.

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- a. By (3 6 months following USEPA approval of this TMDL), submit a technical report to the Regional Board with proposed measures (e.g., plans and specifications for disinfection facilities) to ensure that discharges of wastes from Mexico do not cause or contribute to a violation of this TMDL. The report shall specify the parties responsible for implementation of the measures and include a time schedule for implementation and completion of the measures within three years of USEPA approval of this TMDL.
- b. By (9 months following USEPA approval of this TMDL)\*, submit a report identifying financial options for implementation of the measures discussed in Task No. "a," above.
- c. Submit ~~monthly~~ semi-annual progress reports to the Regional Board regarding progress towards completion of the measures. ~~Monthly~~ The semi-annual reports shall be due by the 15th day of the month, and shall begin in the 6th month following submission of the technical report required in 2.2, a.

Page 6-6, add the following new section before item "E. TOXIC SUBSTANCES MOINITORING":

### **3. New River Pathogen TMDL**

#### **3.1 Compliance Assurance and Enforcement**

The Executive Officer shall use, as the circumstances of the case may warrant, any combination of the following actions to ensure that the severe threat that current bacterial concentration in the New River pose to public health is promptly and effectively corrected:

- Implement and enforce Section 13267 of the California Water Code to ensure that all dischargers subject to Regional Water Quality Control Board, Colorado River Basin Region, Order No. 01-800, NPDES No. CA0017001, General National Pollutant Discharge Elimination System Permit and General Waste Discharge Requirements for Confined Animal feeding Operations (Order No. 01-800), submit, in a prompt and complete manner, the Engineered Waste Management Plan required by Order No. 01-800.
- Either issue or prepare for Regional Board consideration of adoption an enforcement order pursuant to Section 13304 of the California Water Code against any responsible party who violates Regional Board waste discharge requirements.
- Prepare for Regional Board consideration of adoption, an enforcement order pursuant to Section 13301 of the California Water Code against those who violate Board waste discharge requirements and the Pathogen TMDL.
- Issue an Administrative Civil Liability Complaint as provided for by the California Water Code against any responsible party who fails to comply with Board orders, prohibitions, and requests.
- Prepare for Regional Board consideration of adoption a referral of recalcitrant violators of Board orders and prohibitions to the District Attorney or Attorney General for criminal or civil prosecution, respectively.
- Prepare for Regional Board consideration of adoption an enforcement order pursuant to Section 13304 against the appropriate responsible parties if measures to prevent wastes from Mexico from causing or contributing to violations of the Pathogen TMDL are not implemented in a timely manner.

#### **3.2 Water Quality Monitoring**

Monitoring activities are contingent upon adequate programmatic funding. Monitoring activities for the New River Pathogen TMDL will be conducted by the Regional Board pursuant to a Regional Board Quality Assurance Project Plan for the New River (QAPP-NR). The QAPP-NR shall be developed by Regional Board staff and be ready for implementation within 180 days following USEPA approval of this TMDL. The objectives of the monitoring program shall include collection of water quality data for:

- assessment of water quality standards attainment,
- verification of pollution source allocations,
- calibration or modification of selected models (if any).

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- evaluation of point and nonpoint source control implementation and effectiveness,
- evaluation of in-stream water quality,
- evaluation of temporal and spatial trends in water quality, and
- modification of the TMDL as necessary.

The monitoring program shall include a sufficient number of sampling locations and sampling points per location along the New River and major drain tributaries to the river. Monthly grab samples from the above-mentioned surface waters shall be collected and analyzed for the following parameters:

- Flow (to be obtained from IID or USGS)
- Dissolved Oxygen
- pH
- Temperature
- Fecal coliform organisms
- E. Coli
- Fecal streptococci
- Enterococci

Activities implemented by dischargers and responsible parties and surveillance conducted for the New River Pathogen TMDL will be tracked pursuant to a Regional Board implementation tracking plan (ITP). Regional Board staff will develop the ITP within 180 days following USEPA approval of this TMDL. The objectives of Regional Board surveillance and implementation tracking are:

- Assess/track/account for practices already in place;
- Measure the attainment of Milestones;
- Determine compliance with NPDES permits, WLAs, and LAs; and
- Report progress toward implementation of NPS water quality control, in accordance with the SWRCB NPS Program Plan (PROSIP).

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